

REMARKS

Claims 18 and 26 are currently amended. Claim 31 is new. No claims are cancelled in this paper. Thus, claims 1-31 are currently pending. Claims 1, 11, 18, 22, 26, and 27 are in independent form.

In the Office Action, the Examiner rejected Applicant's Abstract as containing greater than 150 words. However, on the first and second pages of Applicant's Response to Non Final Office Action dated November 20, 2007, Applicant respectfully requested that Examiner substitute in a new 143 word Abstract. This substitute Abstract was not entered by the Examiner. Applicant respectfully reaffirms their request that the Examiner substitute in the new Abstract, included in this paper on page 2.

The Examiner responded to Applicant's arguments by rejecting all of claims 1-30 with new rejections, relying on entirely different references of record than in the Non-Final Office Action dated August 23, 2007. The Examiner made the action final, citing MPEP section 706.07(a). (Office Action, page 13.) However, MPEP section 706.07 further states in relevant part:

Before final rejection is in order a clear issue should be developed between the examiner and applicant. Switching . . . from one set of references to another by the examiner in rejecting in successive actions claims of substantially the same subject matter, will alike tend to defeat attaining the goal of reaching a clearly defined issue for an early termination, i.e., either an allowance of the application or a final rejection.

(MPEP, section 706.07.) As the Examiner relied on entirely different references in this Office Action than in the previous Office Action, Applicant respectfully disagrees that a clear issue has been developed to the point where making the prosecution final would be appropriate. Therefore, Applicant respectfully disagrees that it is proper for the Examiner to have made the action final.

Moreover, claims 18 and 26 were objected to as allegedly including a claim recitation that does not positively recite a claim limitation. Claims 1-3, 7-13 and 15-26 were rejected under 35

U.S.C. § 102(b)¹ as allegedly anticipated by U.S. Patent No. 6,967,964 B1 to Svanbro et al. ("Svanbro"), in view of U.S. Patent No. 6,032,197 to Birdwell et al. ("Birdwell"). Claims 4, 5, 6 and 14 were rejected under 35 U.S.C. § 102(b)² as allegedly anticipated by Svanbro, in view of Birdwell, further in view of U.S. Patent No. 6,914,903 B1 to Miyazaki et al. ("Miyazaki").

In view of the following arguments, all claims are believed to be in condition for allowance over the references of record. Therefore, this response is believed to be a complete response to the Office Action.³ Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicant expressly does not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

I. Claim Objections

Both independent claim 18 and independent claim 26 were rejected by the Examiner because each claim included the phrase "capable of," which the Examiner asserts is not a positively recited claim limitation under MPEP 2111.04. (Final Office Action, page 2.) Although Applicant does not concede that "capable of" fails to positively recite a claim limitation or fails to meet the requirements of MPEP 2111.04, claims 18 and 26 have been amended to remove the phrase "capable of." Thus, Applicant respectfully requests the Examiner to withdraw the objections to claims 18 and 26.

¹ In the Office Action, the Examiner rejected all claims under 35 U.S.C. 102(b). (Office Action, pages 3 and 10.) However, Applicant believes that the Examiner intended to reject the claims under 35 U.S.C. 103(a).

² See footnote 1.

³ As Applicant's remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicant's silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such assertions/requirements in the future.

II. Claim Rejections

1. Independent Claim 1

- a. **“a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header”**

Independent claim 1 recites in part, “a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header.” The Examiner cited Svanbro’s Abstract and Fig. 1 element “24” as allegedly disclosing these recitations of claim 1. However, although Svanbro discloses a first and a second field in a compressed header, Svanbro fails to teach or suggest at least this recitation of independent claim 1.

Svanbro’s Abstract states:

A telecommunications network has first and second entities (20₁ and 20₂) which communicate by sending a packet (22) having a compressed header (24'). A header compression key (23) is associated with (e.g., included in) the packet. The header compression key has a first field (23A) which, in a first mode of the invention, is utilized exclusively for distinguishing between different flows of compressed packets (CIDs). In a second mode of the invention, the first field (23A) of the header compression key can be utilized either for distinguishing between the different flows of compressed packets or for distinguishing between different header compression identifiers. Whether the first field of the header compression key is employed exclusively for distinguishing between different flows of compressed packets (the first mode) or can also be employed for distinguishing between different header compression identifiers (second mode) depends on a value in a second field (23B) of the header compression key. In the second mode, a first subset of values for the first field of the header compression key is employed to distinguish between different header compression identifiers, while a second subset of values for the first field is employed to distinguish between the different flows of compressed packets.

(Svanbro, Abstract.) In Figure 1 of Svanbro's, element "24" is labeled "UNCOMPRESSED HEADER," and element "24'" is labeled "COMPRESSED HEADER." Although Svanbro discloses a first and a second field in a compressed header, these fields are used for "distinguishing between different flows of compressed packets" or "distinguishing between different header compression identifiers." Clearly, they are not "a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header." Thus, Svanbro fails to teach or suggest at least this recitation of claim 1.

Moreover, Birdwell is not cited for and fails to cure this deficiency of Svanbro. In contrast, Birdwell states that at most one uncompressed header is associated with a compressed header, as indicated at least by the "(0,y)" style notation for "reduced-length derivatives" of a "full-length data packet." (Birdwell, Fig. 7 and col.8, lines 46-56.) Thus, Birdwell teaches that a compressed header may be associated with just one uncompressed header, in fact teaching away from "a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header."

Indeed, these deficiencies of Birdwell are in part a result of Birdwell being directed to a different field of endeavor, specifically that of a unidirectional broadcast network. (Birdwell, Abstract.) Birdwell simply fails to address header compression over a lossy channel, let alone both packet loss and packet reordering; thus, Birdwell fails to teach or suggest a "third uncompressed header."

As a result, the combination of Svanbro and Birdwell fails to teach or suggest at least "a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header." For at least these reasons, the Examiner's rejection of claim 1, as well as all claims depending therefrom, should be withdrawn.

- b. **“where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.”**

Independent claim 1 recites in part, “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.” The Examiner conceded that Svanbro fails to teach or suggest the recitation, but cited Birdwell’s abstract and stated that “the server transmits a series of intermixed full-length and reduced length packets to the client.” (Final Office Action, page 4, quoting Birdwell, Abstract.) Although Birdwell teaches storing compressed headers until their associated uncompressed headers are indexed into a table of received headers (see Birdwell, col. 8, lines 18-23), Birdwell fails to teach or suggest “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order” as recited by independent claim 1.

Birdwell’s Abstract discloses that:

A broadcast transmission system transmits data packets from a server to a client over a unidirectional broadcast network. The system transmits both full-length data packets, which have uncompressed headers, and reduced-length data packets, which have compressed headers derived from associated uncompressed headers. The server compresses the data packets by compressing the packet header. Compressed packet headers contain fewer header fields than their associated uncompressed headers. The server transmits a series of intermixed full-length and reduced-length packets to the client. As the packets are received, the client determines whether the packets are full-length or reduced-length. If the packet is full-length, the client stores the uncompressed header in a header table. If the packet is reduced-length, the client rebuilds the compressed header from its corresponding uncompressed headers in the header table.

(Birdwell, Abstract.) Thus, although Birdwell does disclose uncompressed and compressed headers “intermixed,” the cited section of Birdwell fails to teach or suggest “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.” Instead, Birdwell’s Abstract indicates that reduced-length packets are rebuilt based on stored full-length stored packets, which would indicate that the full-

length packets are first, not “packets arriving in any order.” At most, the Abstract’s disclosure of “intermixed” packets indicates that both full and reduced length packets may be transmitted over the same “unidirectional broadcast network,” without regard to “packets arriving in any order.”

Birdwell does contain disclosure of compressed headers being stored in a table if the “associated uncompressed headers” have not been received, namely that:

The header table 84 has additional space 90 to temporarily cache compressed headers in the event that their associated uncompressed headers are not yet received at the client and stored in the table. If a compressed header arrives at the client before the uncompressed header from which it is derived, the compressed header is cached until the associated uncompressed header is indexed into the table. In FIG. 7, the reduced-length data packet 60(1,0) is received prior to its corresponding full-length data packet 50(1). The packet decoder 80 places the compressed header CH(1) in a compressed header cache 90. After the associated uncompressed header UH(1) is received and stored in entry 1, the packet decompressor 82 retrieves the cached compressed header CH(1) from cache 90 and rebuilds it from the uncompressed header UH(1).

(Birdwell, col. 8, lines 15-29.) However, this disclosure additionally fails to read on “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.” Birdwell clearly states that at most one header (“the uncompressed header”) is “associated” with a compressed header, but claim 1 recites no such limitation. At least because Birdwell includes this requirement, it cannot teach or suggest “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.”

The disclosed deficiency of Birdwell is particularly relevant within the context of claim 1. As noted above in subsection a, claim 1 further recites in part “a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header.” Since Birdwell does not teach or suggest, and in fact teaches away from, a “second value for deriving said uncompressed header based on a third uncompressed header” within any context, let alone “arriving in any order,” Birdwell further fails to teach or suggest at least “where said

uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.”

Thus, the combination of Svanbro and Birdwell fails to teach or suggest “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order.” For at least these reasons, the Examiner’s rejection of claim 1, as well as all claims depending therefrom, should be withdrawn.

2. Independent Claim 11

Independent claim 11 recites in part, “a packet comprising: a first value for deriving said uncompressed header based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header” and “maintaining said packet at said second network node until at least one of said second uncompressed header and said third uncompressed header are made available.” Similar to the arguments mentioned above with regard to claim 1, the combination of Svanbro and Birdwell fails to teach or suggest at least these recitations of claim 11.

As the combination of Svanbro and Birdwell fail to teach or suggest “a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header” as recited by independent claim 1, the cited references similarly fail to disclose “a packet comprising: a first value for deriving said uncompressed header based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header” as recited by independent claim 11.

Moreover, as discussed above with regard to claim 1’s recitation “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order,” the combination of Svanbro and Birdwell fails to teach or suggest “maintaining said packet at said second network node until at least one of said second uncompressed header and said third uncompressed header are made available.” The Examiner

conceded Svanbro fails to disclose these recitations and cited Birdwell, but Birdwell fails to cure these deficiencies of Svanbro. Birdwell clearly states that at most one header (“the uncompressed header”) is “associated” with a compressed header. (Birdwell, col. 8, lines 15-29.) As discussed above in detail, claim 11 recites no such limitation. Thus, Birdwell fails to read on “at least one of said second uncompressed header and said third uncompressed header” as recited by claim 11.

Thus, for reasons similar to those described above in relation to claim 1, the combination of Svanbro and Birdwell fails to teach or suggest at least these recitations of independent claim 11. As a result, the Examiner’s rejection of independent claim 11, as well as all claims depending therefrom, should be withdrawn.

3. Independent Claim 22

Similarly, independent claim 22 recites in part “a packet comprising a plurality of values corresponding to said plurality of packet headers, each of said plurality of values for deriving an uncompressed header” and “maintaining said packet until at least one of said plurality of packet headers is made available.” Although claim 22 recites different details from those recited in claim 1, the combination of Svanbro and Birdwell still lacks the required teachings.

As the combination of Svanbro and Birdwell fails to teach or suggest “a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header” as recited by independent claim 1, the cited references similarly fail to disclose “a plurality of values corresponding to said plurality of packet headers, each of said plurality of values for deriving an uncompressed header.”

Moreover, as the combination of Svanbro and Birdwell fails to teach or suggest “maintaining said packet at said second network node until at least one of said second uncompressed header and said third uncompressed header are made available” as recited by claim

11, the cited references similarly fail to disclose “maintaining said packet until at least one of said plurality of packet headers is made available.”

Thus, for reasons similar to those described above in relation to claims 1 and 11, the combination of Svanbro and Birdwell fails to teach or suggest at least these recitations of independent claim 22. As a result, the Examiner’s rejection of independent claim 22, as well as all claims depending therefrom, should be withdrawn.

4. Independent Claims 18 And 26

Further, as amended, independent claim 18 recites in part “forming a plurality of values by computing, for each of at least two transmitted in said plurality of transmitted headers, a corresponding value for deriving said uncompressed header” and “wherein said packet is received out of order of at least one of said plurality of transmitted headers.” As amended, independent claim 26 recites in part to “form a plurality of values by computing, for at least two transmitted headers in said plurality of transmitted headers, a corresponding value for deriving said uncompressed header based on a corresponding one of said at least two transmitted headers” and “wherein said computer program product is configured to receive said packet out of order of at least one of said plurality of transmitted headers.” Claim 18 recites a method and claim 26 recites a computer program product embodied on a computer-readable medium. Further, each claim recites different details. Nevertheless, as mentioned above, the combination of Svanbro and Birdwell lacks the required teachings.

As the combination of Svanbro and Birdwell fails to teach or suggest “a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header” as recited by independent claim 1, the cited references similarly fail to teach or suggest the formation of these values, let alone forming “a corresponding value for deriving said uncompressed header” “for at least two transmitted headers in said plurality of transmitted headers,”

Moreover, as the combination fails to teach or suggest “where said uncompressed header, said second uncompressed header, and said third uncompressed header are associated with different packets arriving in any order” as recited by claim 1, similarly the combination fails to teach or suggest “wherein said packet is received out of order of at least one of said plurality of transmitted headers” as well as a computer program product similarly configured “to receive said packet out of order.”

Thus, for reasons similar to those described above in relation to claims 1 and 11, the combination of Svanbro and Birdwell fails to teach or suggest at least these recitations of claims 18 and 26. As a result, the Examiner’s rejections of independent claims 18 and 26, as well as all claims depending therefrom, should be withdrawn.

4. Independent Claim 27

Independent claim 27 recites in part “a packet comprising a plurality of values corresponding to said plurality of packet headers, each of said plurality of values for deriving an uncompressed header” and to “maintain said packet until at least one of said plurality of packets headers is made available.” Although claim 27 recites a computer program product embodied on a computer-readable medium as well as different details, the combination of Svanbro and Birdwell lacks the required teachings.

As the combination fails to teach or suggest “a compressed header comprising: a first value for deriving an uncompressed header for said packet based on a second uncompressed header; and a second value for deriving said uncompressed header based on a third uncompressed header” as recited by independent claim 1, similarly the combination fails to teach or suggest “a packet comprising a plurality of values corresponding to said plurality of packet headers, each of said plurality of values for deriving an uncompressed header.”

Moreover, for similar reasons that the combination fails to teach or suggest “maintaining said packet at said second network node until at least one of said second uncompressed header and

said third uncompressed header are made available” as recited by independent claim 11, the combination further fails to teach or suggest to “maintain said packet until at least one of said plurality of packets headers is made available.”

Thus, for reasons similar to those described above in relation to claims 1 and 11, the combination of Svanbro and Birdwell fails to teach or suggest at least these recitations of claim 27. As a result, the Examiner’s rejection of independent claim 27, as well as all claims depending therefrom, should be withdrawn.

5. Dependent Claims 2-5, 7-10, 12-17, 19-21, 23-25, And 28-31

Claims 2-5, 7-10, 12-17, 19-21, 23-25, and 28-30 are in condition for allowance at least because they are dependent from one of the independent claims 1, 11, 18, 22, 26, or 27. Nevertheless, these dependent claims also recite independently patentable subject matter, representative examples of which are discussed below.

a. Claim 6

Claim 6 recites in part “said first value and said second value are encoded by at least one of: a variable-length code and a sign-based code.” The Examiner conceded that Svanbro and Birdwell fail to teach or suggest the claim recitation, but cited Miyazaki col. 14, lines 5-10 for the alleged teaching. (Final Office Action, page 11.) However, Miyazaki fails to teach or suggest “said first value and said second value are encoded by at least one of: a variable-length code and a sign-based code” as recited by claim 6.

The cited section of Miyazaki states:

According to a thirtieth aspect of the present invention, in the data transmission method of the twenty-ninth aspect, each of the item-basis compressed data includes data length information indicating the length of the compressed data. Therefore, the item-basis compressed data is restored with efficiency.

(Miyazaki, col. 14, lines 6-11.) However, that the compressed data may include length information does not teach or suggest “variable-length code,” merely that the compressed data may be of

variable length. Indeed, Miyazaki discloses difference data, difference data length information, and compression type information, where the compression type is a “difference . . . from the reference data.” (Miyazaki, col. 20, lines 40-54.) However, Miyazaki fails to teach or suggest “variable-length code” or “sign-based code” at all, let alone “wherein said first value and said second value are encoded by at least one of: a variable-length code and a sign-based code,” as recited in claim 6.

Thus, for at least these reasons claim 6 is separately patentable.

b. Claims 19 And 23

Claims 19 and 23 each recite in part, “wherein a predetermined number of transmitted packet headers are stored.” The Examiner conceded that Svanbro fails to disclose the recitation, and cited Birdwell “Fig. 7 ‘HEADER TABLE’, and column 8 lines 15-30)” as disclosing these recitations. However, in contrast to “wherein a predetermined number of transmitted packet headers are stored,” the cited section of Birdwell merely discloses that a memory “M” of finite size may be used to store packet headers. (Birdwell, col. 8, lines 15-30.) Nowhere does Birdwell state that the number of stored transmitted packet headers is “a predetermined number.”

Moreover, Birdwell further states that “[t]he uncompressed headers UH(O), UH(1), . . . UH(M-1) stored in the table can be configured to time out or expire after a preset duration.” (Id., col. 8, lines 31-33.) Thus, Birdwell in fact teaches away from, “wherein a predetermined number of transmitted packet headers are stored” by its contrary teaching of removing items from the table based on time or expiration, not based on “a predetermined number.”

For at least these reasons, the combination of Svanbro and Birdwell fails to teach or suggest “wherein a predetermined number of transmitted packet headers are stored,” and the Examiner’s rejection of claims 19 and 23 should be withdrawn.

c. Claim 30

Claim 30 recites:

30. The method of claim 29, wherein said packet includes a first sequence number, said second uncompressed header includes a

second sequence number, said third uncompressed header includes a third sequence number, and the availability of at least one of said second uncompressed header and said third uncompressed header in said history for said packet is determined based on said sequence numbers.

The Examiner cited “see abstract and Fig. 1 ‘CID’” of Svanbro as disclosing these claim recitations. Svanbro’s CIDs are “context identifiers” used for “distinguishing between different flows of compressed packets” or “distinguishing between different header compression identifiers.” (Svanbro, Abstract, Fig. 1, col.4, line 64.) Clearly, Svanbro’s CIDs are not sequence numbers.

Birdwell is not cited for and does not disclose this recitation of claim 30. Thus, for at least these reasons, the combination of Svanbro and Birdwell fails to teach or suggest the recitation of claim 30, and the Examiner’s rejection of claim 30 should be withdrawn.

d. Claim 31

New claim 31 recites:

31. The method of claim 28, wherein maintaining said packet at said second network node until at least one of said second uncompressed header and said third uncompressed header are made available further comprises:

receiving a second packet at said second network node, said second packet comprising:

a third value for deriving said second uncompressed header based on a fourth uncompressed header; and

a fourth value for deriving said second uncompressed header based on a fifth uncompressed header;

maintaining said second packet at said second network node until at least one of said fourth uncompressed header and said fifth uncompressed header are made available; and

deriving said second uncompressed header at said second network node based on at least one of said fourth uncompressed header and said fifth uncompressed header.

Applicant respectfully submits that none of Svanbro, Birdwell, and Miyazaki teach or suggest at least that an uncompressed header may be derived from a compressed packet, and then maintained

in turn for use in deriving an uncompressed header from a second compressed packet. Thus, Applicant respectfully submits that claim 31 is separately patentable.

CONCLUSION

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 65632-0527 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to this deposit account.

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